

## Conceptual Water Budget

A conceptual water budget prepared from the assembled 2002 pumpage, recharge and surface water discharge data is presented in Table 7. Estimates of long-term natural recharge that have been developed from the Prescott model update are used for that water budget component. The 2002 conceptual water budget for the Prescott AMA indicates that groundwater outflows exceeded inflows, resulting in a 15,450 acre-foot overdraft for the year.

**Table 1. Conceptual Water Budget (2002) Prescott AMA**

(Figures rounded to nearest 10 acre-feet)

<b>Groundwater Inflows</b>	<b>2002 Volume (acre-feet)</b>
Natural Recharge (1)	5,750
Incidental Recharge (2)	3,110
Artificial Recharge:	
(City of Prescott) (3)	1,760
(Prescott Valley) (4)	1,500
<b>Total Inflows</b>	<b>12,120</b>
<b>Groundwater Outflows</b>	
Groundwater Pumpage:	
Non-Exempt (5)	21,820
Exempt (6)	1,700
Groundwater Discharge:	
Underflow to Big Chino (7)	1,800
Del Rio Springs Discharge (8)	1,090
Agua Fria Baseflow near Humboldt (9)	1,160
<b>Total Outflows</b>	<b>27,570</b>
<b>Inflow – Outflow = (Overdraft)</b>	<b>15,450</b>

- (1) Estimate for long-term average annual mountain front recharge (Nelson, 2002, pg. 10). Actual annual volumes may vary significantly from the long-term average.
- (2) Estimated at 50% agricultural water use for 2001 (Corkhill, and Mason, 1995, pg. 58), (Nelson, 2002, pg. 10).
- (3) Includes treated effluent and surface water. 2002 - City of Prescott Annual Underground Storage Facility Report-Schedule 71.
- (4) Data provided by Neil Wadsworth (8/12/03) – Town of Prescott Valley. Includes effluent recharged in channel of Agua Fria River and in PV lakes.
- (5) ADWR Registry of Groundwater Rights database.
- (6) Estimated domestic and exempt well pumpage in Prescott AMA groundwater basin area only. 1,400 acre/feet per year of additional domestic well pumpage estimated for surrounding mountainous area (see pumpage section of this report for further details).
- (7) ADWR model simulated underflow to Big Chino in 1999 (Nelson, 2002, pg. 14, Table 5).
- (8) USGS 2002 annual discharge at Del Rio Springs gage (09502900). Note! Unquantified diversions of groundwater discharged from the cienega above the USGS Del Rio Springs gage are not reflected in the gage's annual total. Also a minor, unquantified volume of groundwater supports a small riparian area in the immediate area of the springs. For comparison purposes, the 1999 ADWR- model simulated groundwater discharge including undifferentiated ET component at Del Rio Springs = 1,800 AF/yr (Nelson, 2002, pg. 14, Table 5).
- (9) USGS 2002 annual discharge at the Agua Fria gage near Humboldt (09512450). Annual discharge reduced to account for significant surface water runoff. For comparison purposes, the 1999 ADWR – model simulated groundwater discharge including a minor undifferentiated ET component to Agua Fria River near Humboldt = 1,400 AF/yr (Nelson, 2002, pg. 14, Table 5).